e: 4520-43-P

DEPARTMENT OF LABOR

Mine Safety and Health Administration

Petition for Modification of Application of Existing Mandatory Safety Standards

AGENCY: Mine Safety and Health Administration, Labor.

ACTION: Notice.

SUMMARY: This notice is a summary of a petition for modification submitted to the Mine Safety and Health Administration (MSHA) by the party listed below.

DATES: All comments on the petition must be received by MSHA's Office of Standards, Regulations, and Variances on or before [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may submit your comments including the docket number of the petition by any of the following methods:

1. Electronic Mail: zzMSHA-comments@dol.gov. Include the docket number of the petition in the subject line of the message.
2. Facsimile: 202-693-9441.
3. Regular Mail or Hand Delivery: Regular Mail or Hand Delivery: MSHA, Office of Standards, Regulations, and Variances, 201 12th Street South, Suite 4E401, Arlington, Virginia 22202-5452, Attention: S. Aromie Noe, Acting Director, Office of Standards, Regulations, and Variances. MSHA will consider only comments postmarked by the U.S. Postal Service or proof of delivery from another delivery service such as UPS or Federal Express on or before the deadline for comments. Persons delivering documents are required to check in at the receptionist's desk in Suite 4E401. Individuals may inspect copies of the petition and comments during normal business hours at the address listed above. Before visiting MSHA in person, call 202-693-9455 to make an appointment in keeping with the Department of Labor's COVID-19 policy. Special health precautions may be required.

FOR FURTHER INFORMATION CONTACT: S. Aromie Noe, Office of Standards, Regulations, and Variances at 202-693-9440 (voice), Noe.Song-Ae.A@dol.gov (email), or 202-693-9441 (facsimile). [These are not toll-free numbers.]

SUPPLEMENTARY INFORMATION: Section 101(c) of the Federal Mine Safety and Health Act of 1977 and Title 30 of the Code of Federal Regulations (CFR) part 44 govern the application, processing, and disposition of petitions for modification.

I. **Background**

Section 101(c) of the Federal Mine Safety and Health Act of 1977 (Mine Act) allows the mine operator or representative of miners to file a petition to modify the application of any mandatory safety standard to a coal or other mine if the Secretary of Labor determines that:

1. An alternative method of achieving the result of such standard exists which will at all times guarantee no less than the same measure of protection afforded the miners of such mine by such standard; or

2. The application of such standard to such mine will result in a diminution of safety to the miners in such mine.

In addition, sections 44.10 and 44.11 of 30 CFR establish the requirements for filing petitions for modification.

II. Petition for Modification

Docket Number: M-2021-034-C

Petitioner: Rosebud Mining Company, 301 Market Street, Kittanning, Pennsylvania, 16201

Mine: Knob Creek Mine, MSHA ID No. 36-09394, located in Indiana County, Pennsylvania

Regulation Affected: 30 CFR 75.1700 (Oil and gas wells).

Modification Request: The petitioner requests a modification of the existing standard, 30 CFR 75.1700, as it relates to oil and gas wells at the mine. Specifically, the petitioner is proposing procedures for: cleaning out and preparing oil and gas wells prior to plugging or re-plugging; plugging or re-plugging oil or gas wells to the surface; plugging or re-plugging oil or gas wells

for use as degasification boreholes; preparing and plugging or re-plugging oil or gas wells; and mining through a plugged or re-plugged well.

The petitioner states that:

(a) The Knob Creek Mine is opened into the Upper Kittanning Coal seam through three drifts. Coal is produced on one underground section using a continuous mining machine and a continuous haulage system. The mine normally operates one production shift per day, 5 to 6 days per week, and produces an average of 452 tons of raw coal per day. The mine employs 20 persons underground and 3 on the surface.

(b) The Knob Creek mine uses a room and pillar method of mining. A continuous miner with attached haulage develops main entries. After the mains are established, butts, rooms, and/or panels are developed off of the mains. The length of the rooms and/or panels typically extends a distance of 600 feet, depending on permit boundaries, projections, and conditions.

(c) The Knob Creek Mine Permit contains: oil or gas wells that have been depleted of oil or gas production; producing wells; oil or gas wells that have not produced oil or gas and may have been plugged; and coal bed methane wells (CBM). Wells drilled into potential oil or gas producing formations that did not produce commercial quantities of either gas or oil (e.g., exploratory wells, wildcat wells, or dry holes) are classified as oil or gas wells by MSHA. These wells would alter the mining projections for the life of the mine and not allow the most efficient use of air available to the mine, if the barrier established by 30 CFR 75.1700 were to remain in place. The presence of the 30 CFR 75.1700 barrier would also limit the safest and most efficient use of in-seam CBM wells.

The petitioner proposes the following alternative method:

(a) District Manager's approval is required.

(1) The type of oil or gas well considered under this petition includes wells that have been depleted of oil or gas production, have not produced oil or gas and may have been

plugged, and active wells. No Marcellus and Utica wells are contained within the Knob Creek Mine Permit or are subject to this modification.

(2) A safety barrier of 300 feet in diameter (150 feet between any mined area and a well) shall be maintained around all oil and gas wells (including but not limited to: active, inactive, abandoned, shut-in, and previously plugged wells; water injection wells; and carbon dioxide sequestration wells) until the District Manager has given approval to proceed with mining.

(3) Prior to mining within the safety barrier of 300 feet in diameter around any well the mine plans to intersect, the petitioner shall provide the District Manager with a sworn affidavit or declaration executed by a company official stating that all mandatory procedures for cleaning out, preparing, and plugging each gas or oil well have been completed as described by the terms and conditions of this Decision and Order.

(4) If well intersection is not planned, the mine petitioner may request a permit to reduce the 300 foot diameter of the safety barrier that does not include intersection of the well. The petitioner will provide any documentation that the District Manager may require to help verify the accuracy of the location of the well in respect to the mine maps and mining projections. This information may include survey closure data, down-hole well deviation logs, historical well intersection location data, and any additional data required by the District Manager. If the District Manager determines that the proposed barrier reduction is reasonable and provides approval, the petitioner may then mine within the safety barrier of the well.

(5) The affidavit or declaration must be accompanied by all logs described in (b)(8) and (b)(9) and any other records which the District Manager may request; the District Manager also may inspect the well.

(6) The District Manager will determine if the petitioner has complied. If the District Manager determines that the procedures for cleaning out, preparing, and plugging each

well have been properly performed, the District Manager may approve the petitioner to mine within the safety barrier of the well, subject to the terms and conditions of the Decision and Order.

(7) The terms and conditions of the Decision and Order will apply to all types of underground coal mining by petitioner at this mine.

(b) The petitioner proposes to use the following mandatory procedures for cleaning out and preparing oil and gas wells prior to plugging or re-plugging.

(1) The petitioner shall test for gas emissions inside the hole. The District Manager shall be contacted if gas emissions are present.

(2) A diligent effort shall be made to clean the well to the original total depth. The petitioner shall contact the District Manager prior to stopping the pulling of casing or the cleaning out the total depth of the well.

(3) If this depth cannot be reached, and the total depth of the well is less than 4,000 feet, the petitioner shall completely clean out the well from the surface to at least 200 feet below the base of the lowest mineable coal seam, unless the District Manager requires cleaning to a greater depth.

(4) If the total depth of the well is 4,000 feet or greater, the petitioner shall completely clean out the well from the surface to at least 400 feet below the base of the lowest mineable coal seam. The petitioner shall remove all material from the entire diameter of the well, wall to wall.

(5) The petitioner shall provide the District Manager with all information it possesses concerning the geological nature of the strata and the pressure of the well.

(6) If the total depth of the well is unknown and there is no historical information, the petitioner shall contact the District Manager before proceeding.

(7) Down-hole logs shall be prepared for each well. Logs shall consist of a caliper survey; a gamma log; a bond log; and a deviation survey for determining the top, bottom, and

thickness of all coal seams down to the lowest minable coal seam; potential hydrocarbon producing strata; and the location of any existing bridge plug. A journal shall be maintained describing the depth of each material encountered; the nature of each material encountered; bit size and type used to drill each portion of the hole; length and type of each material used to plug the well; length of casing(s) removed, perforated, ripped, or left in place; any sections where casing was cut or milled; and other information concerning cleaning and sealing the well. Invoices, work-orders, and other records relating to all work on the well shall be maintained as part of this journal and provided to MSHA upon request.

(8) When cleaning out the well as provided for in section (b), a diligent effort shall be made to remove all of the casing in the well. After the well is completely cleaned out and all the casing removed, the well should be plugged to the total depth by pumping expanding cement slurry and pressurizing to at least 200 pounds per square inch (psi). Casing may be cut, milled, perforated, or ripped at all mineable coal seam levels to facilitate the removal of casing remaining in the coal seam, with mining equipment. Any remaining casing shall be perforated or ripped to permit the injection of cement into voids within and around the well.

(9) All casing remaining at mineable coal seam levels shall be perforated or ripped at least every 5 feet from 10 feet below the coal seam to 10 feet above the coal seam. Perforations or rips are required at least every 50 feet from 200 feet (400 feet if the total well depth is 4,000 feet or greater) below the base of the lowest mineable coal seam up to 100 feet above the uppermost mineable coal seam. The petitioner shall take appropriate steps to ensure that the annuli between the casing and the well walls are filled with expanding cement (minimum 0.5 percent expansion upon setting) and contain no voids.

(10) If it is not possible to remove all of the casing, the petitioner shall notify the District Manager before any other work is performed. If the well cannot be cleaned out or the

casing removed, the petitioner shall prepare the well as described in this petition from the surface to at least 200 feet below the base of the lowest mineable coal seam for wells less than 4,000 feet in depth and 400 feet below the lowest mineable coal seam for wells 4,000 feet or greater, unless the District Manager requires cleaning out and removal of casing to a greater depth.

(11) If the petitioner, using a casing bond log, can demonstrate to the satisfaction of the District Manager that all annuli in the well are already adequately sealed with cement, the petitioner may not be required to perforate or rip the casing for that particular well. When multiple casing and tubing strings are present in the coal horizon(s), any remaining casing shall be ripped or perforated and filled with expanding cement as previously indicated. If needed, an acceptable casing bond log for each casing and tubing string shall be used in lieu of ripping or perforating multiple strings.

(12) If the District Manager determines that the completely cleaned-out well is emitting excessive amounts of gas, the petitioner shall place a mechanical bridge plug in the well. The mechanical bridge plug shall be placed in a competent stratum at least 200 feet (400 feet if the total well depth is 4,000 feet or greater) below the base of the lowest mineable coal seam, but above the top of the uppermost hydrocarbon-producing stratum, unless the District Manager requires a greater distance. The petitioner shall provide the District Manager with all information it possesses concerning the geological nature of the strata and the pressure of the well. If it is not possible to set a mechanical bridge plug, an appropriately sized packer may be used. The petitioner shall document what has been done to "kill the well" and plug the hydrocarbon-producing strata.

(13) If the upper-most hydrocarbon-producing stratum is within 300 feet of the base of the lowest minable coal seam, the petitioner shall properly place mechanical bridge plugs as described in (b)(11) to isolate the hydrocarbon-producing stratum from the expanding cement plug. The petitioner shall place a minimum of 200 feet (400 feet if the total well

depth is 4,000 feet or greater) of expanding cement below the lowest mineable coal seam, unless the District Manager requires a greater distance.

(c) The petitioner proposes to use the following mandatory procedures for plugging or re-plugging oil or gas wells to the surface. After completely cleaning out the well as specified in section (b):

(1) Expanding cement slurry shall be pumped down the well to form a plug which runs from the surface to at least 200 feet (400 feet if the total well depth is 4,000 feet or greater) below the base of the lowest mineable coal seam, or lower if required by the District Manager. The expanding cement will be placed in the well under a pressure of at least 200 psi. Portland cement or a lightweight cement mixture may be used to fill the area from the surface to 100 feet above the top of the uppermost mineable coal seam, or higher if required by the District Manager.

(2) Steel turnings or other small magnetic particles shall be embedded in the top of the cement near the surface to serve as a permanent magnetic monument of the well. In the alternative, a 4-inch or larger diameter casing, set in cement, shall extend at least 36 inches above the ground level with the American Petroleum Institute (API) well number engraved or welded on the casing. When the hole cannot be marked with a physical monument (e.g., prime farmland), high-resolution GPS coordinates (one-half meter resolution) shall be recorded.

(d) The petitioner proposes to use the following mandatory procedures for plugging or re-plugging oil and gas wells for use as degasification wells. After completely cleaning out the well as specified in section (b), the following procedures shall be followed:

(1) The petitioner shall set a cement plug in the well by pumping an expanding cement slurry down the tubing to provide at least 200 feet (400 feet if the total well depth is 4,000 feet or greater) of expanding cement below the lowest mineable coal seam, unless the District Manager requires a greater depth.

(i) The expanding cement will be placed in the well under a pressure of at least 200 psi.

(ii) The top of the expanding cement shall extend at least 50 feet above the top of the coal seam being mined, unless the District Manager requires a greater distance.

(2) The petitioner shall securely grout a suitable casing into the bedrock of the upper portion of the degasification well to protect it. The remainder of this well may be cased or uncased.

(3) As required by the District Manager in the approved ventilation plan, the petitioner shall fit the top of the degasification casing with a wellhead that may be equipped with check valves, shut-in valves, sampling ports, flame arrestor equipment, and security fencing.

(4) Operation of the degasification well shall be addressed in the approved ventilation plan. This may include periodic tests of methane levels and limits on the minimum methane concentrations that may be extracted.

(5) After the area of the coal mine that is degassed by a well is sealed or the coal mine is abandoned, the petitioner shall plug all degasification wells using the following procedures:

(i) A tube shall be inserted to the bottom of the well or, if not possible, to within 100 feet above the coal seam being mined. Any blockage must be removed to ensure that the tube can be inserted to this depth.

(ii) A cement plug shall be set in the well by pumping Portland cement or lightweight cement mixture down the tubing until the well is filled to the surface.

(iii) Steel turnings or other small magnetic particles shall be embedded in the top of the cement near the surface to serve as a permanent magnetic monument of the well. Alternatively, a 4-inch or larger casing, set in cement, shall extend at least

36 inches above the ground level with the API well number engraved or welded on the casing.

(e) If the District Manager agrees with the petitioner's determination that certain wells cannot be completely cleaned out due to damage to the well caused by subsidence, caving, or other factors, the petitioner proposes to use the following procedures for preparing and plugging or re-plugging such oil or gas wells.

(1) A hole shall be drilled adjacent and parallel to the well, to a depth of at least 200 feet (400 feet if the total well depth is 4,000 feet or greater) below the lowest mineable coal seam, unless the District Manager requires a greater depth.

(2) A geophysical sensing device shall be used to locate any casing which may remain in the well.

(3) If the well contains casing(s), the petitioner shall drill into the well from the parallel hole. From 10 feet below the coal seam to 10 feet above the coal seam, the petitioner shall perforate or rip all casings at least every 5 feet. Beyond this distance, the petitioner shall perforate or rip all casings at least every 50 feet from at least 200 feet (400 feet if the total well depth is 4,000 feet or greater) below the base of the lowest mineable coal seam up to 100 feet above the seam being mined, unless the District Manager requires a greater distance. The annuli between the casings and the well wall shall be filled with expanding cement (minimum 0.5 percent expansion upon setting) and the petitioner shall ensure that these areas contain no voids. If the petitioner, using a casing bond log, can demonstrate to the satisfaction of the District Manager that the annulus of the well is adequately sealed with cement, then the petitioner may not be required to perforate or rip the casing for that particular well or fill these areas with cement. When multiple casing and tubing strings are present in the coal horizon(s), any remaining casing shall be ripped or perforated and filled with expanding cement as previously indicated. If needed, an

acceptable casing bond log for each casing and tubing string shall be used in lieu of ripping or perforating multiple strings.

(4) If the District Manager agrees with the petitioner's determination that there is insufficient casing in the well to allow the method outlined in (e)(3) to be used, the petitioner shall use a horizontal hydraulic fracturing technique to intercept the original well. From at least 200 feet (400 feet if the total well depth is 4,000 feet or greater) below the base of the lowest mineable coal seam to a point at least 50 feet above the seam being mined, the petitioner shall fracture in at least six places at intervals to be agreed upon by the petitioner and the District Manager. Expanding cement shall be pumped into the fractured well to fill all intercepted voids.

(5) Down-hole logs shall be prepared for each well. Logs shall consist of a caliper survey; a gamma log; a bond log; and a deviation survey for determining the top, bottom, and thickness of all coal seams down to the lowest minable coal seam; potential hydrocarbon producing strata; and the location of any existing bridge plug. The petitioner may obtain the logs from the adjacent hole rather than the well if the condition of the well makes it impractical to insert the equipment necessary to obtain the log.

(6) A journal shall be maintained describing the depth of each material encountered; the nature of each material encountered; bit size and type used to drill each portion of the hole; length and type of each material used to plug the well; length of casing(s) removed, perforated, ripped, or left in place; any sections where casing was cut or milled; and other pertinent information concerning sealing the well. Invoices, work orders, and other records relating to all work on the well shall be maintained as part of this journal and provided to MSHA upon request.

(7) After the well has been plugged as described in (e)(3) and/or (e)(4), the petitioner shall plug the adjacent hole, from the bottom to the surface, with Portland cement or a lightweight cement mixture. Steel turnings or other small magnetic particles shall be

embedded in the top of the cement near the surface to serve as a permanent magnetic monument of the well. Alternatively, a 4-inch or larger casing, set in cement, shall extend at least 36 inches above the ground level. A combination of the methods outlined in (e)(3) and (e)(4) may have to be used in a single well, depending upon the conditions of the hole and the presence of casings. The petitioner shall discuss the nature of each hole with the District Manager. The District Manager may require that more than one method be utilized. The petitioner may submit an alternative plan to the District Manager for approval to use different methods to address wells that cannot be completely cleaned out. The District Manager may require additional documentation and certification by a registered petroleum engineer to support the proposed alternative methods.

(f) The petitioner proposes to use the following procedures when mining within a 100-foot diameter barrier around a well.

(1) A representative of the petitioner, a representative of the miners, the appropriate State agency, or the MSHA District Manager may request that a conference be conducted prior to intersecting any plugged or re-plugged well. Upon receipt of any such request, the petitioner shall schedule such a conference. The party requesting the conference shall notify all other parties listed above within a reasonable time prior to the conference to provide opportunity for participation. The purpose of the conference shall be to review, evaluate, and accommodate any abnormal or unusual circumstance related to the condition of the well or surrounding strata when such conditions are encountered.

(2) The petitioner shall intersect a well on a shift approved by the District Manager. The petitioner shall give sufficient notice of planned intersection to the District Manager and the miners' representative to arrange for the presence of representatives.

(3) When using continuous mining methods, the petitioner shall install drivage sights at the last open crosscut near the place to be mined to ensure intersection of the well. The drivage sites shall not be more than 50 feet from the well.

(4) The petitioner shall ensure that fire-fighting equipment including fire extinguishers, rock dust, and sufficient fire hose to reach the working face area of the well intersection (when either the conventional or continuous mining method is used) is available and operable during all well intersections. The fire hose shall be located in the last open crosscut of the entry or room. The petitioner shall maintain the water line to the belt conveyor tailpiece along with a sufficient amount of fire hose to reach the farthest point of penetration on the section.

(5) The petitioner shall ensure that sufficient supplies of roof support and ventilation materials are available and located at the last open crosscut. In addition, emergency plugs and suitable sealing materials shall be available in the immediate area of the well intersection.

(6) On the shift prior to intersecting the well, the petitioner shall service all equipment and check it for permissibility. Water sprays, water pressures, and water flow rates used for dust and spark suppression shall be examined and any deficiencies corrected.

(7) The petitioner shall calibrate the methane monitor(s) on the longwall, continuous mining machine, or cutting machine and loading machine on the shift prior to intersecting the well.

(8) When mining is in progress, the petitioner shall perform tests for methane with a handheld methane detector at least every 10 minutes from the time that the continuous mining machine is mining within 30 feet of the well until the well is intersected. During the actual cutting process, no individual shall be allowed on the return side until the well intersection has been completed and the area has been examined and declared safe. The petitioner's most current approved ventilation plan will be followed at all times unless the District Manager determines a greater air velocity is necessary during the intersection.

(9) When using continuous or conventional mining methods, the work area shall be free from accumulations of coal dust and coal spillages, and rock dust shall be placed on the

roof, rib, and floor to within 20 feet of the face when intersecting the well. When the well is intersected, the petitioner shall deenergize all equipment, and thoroughly examine and determine the area to be safe before permitting mining to resume.

(10) After a well has been intersected and the working place determined to be safe, mining shall continue inby the well at a sufficient distance to permit adequate ventilation around the well.

(11) If the casing is cut or milled at the coal seam level, torches should generally not be used. However, in rare instances, torches may be used for inadequately or inaccurately cut or milled casings. No open flame shall be permitted in the area until adequate ventilation has been established around the well bore and methane levels of less than 1.0 percent are present in all areas that will be exposed to flames and sparks from the torch. The petitioner shall apply a thick layer of rock dust to the roof, face, floor, ribs, and any exposed coal within 20 feet of the casing prior to the use of torches.

(12) Non-sparking (brass) tools shall be located on the working section and shall be used exclusively to expose and examine cased wells.

(13) Only persons engaged in the well intersection shall be permitted in the area of the well.

(14) The petitioner shall alert all personnel in the mine of the planned intersection of the well prior to their going underground if the planned intersection is to occur during their shift. This warning shall be repeated for all shifts until the well has been mined through.

(15) The well intersection shall be under the direct supervision of a certified individual. Instructions concerning the well intersection shall be issued only by the certified individual in charge.

(16) If the petitioner cannot find the well in the middle of the panel or room and misses the anticipated intersection, mining shall cease and the District Manager shall be notified.

(17) The terms and conditions of the Decision and Order shall not impair the authority of representatives of MSHA to interrupt or halt the well intersection and issue a withdrawal order should they deem it necessary for the safety of the miners. MSHA may order an interruption or cessation of the well intersection and/or a withdrawal of personnel by issuing either an oral or written order to that effect, to a representative of the petitioner. Operations in the affected area of the mine may not resume until MSHA permits resumption. The petitioner and miners shall immediately comply with oral or written MSHA orders.

(18) A copy of the Decision and Order shall be maintained at the mine and be available to the miners.

(19) If the well is not plugged to the total depth of all minable coal seams identified in the core hole logs, any coal seams beneath the lowest plug will remain subject to the barrier requirements of 30 CFR 75.1700 should those coal seams be developed in the future.

(20) All necessary safety precautions and safe practices according to industry standards required by MSHA regulations and State agencies having jurisdiction over the plugging site shall be followed to ensure the protection of the miners involved in the process.

(21) All miners involved in the plugging or re-plugging operations shall be trained on the terms and conditions of the Decision and Order prior to starting the process, and a copy of the Decision and Order shall be posted at the well site until the plugging or re-plugging has been completed.

(22) Mechanical bridge plugs shall incorporate the best available technologies that are either required or recognized by the appropriate State agency and/or oil and gas industry.

(23) Within 30 days after the Decision and Order becomes final, the petitioner shall submit proposed revisions for its approved 30 CFR part 48 training plan to the District Manager. These proposed revisions shall include initial and refresher training on compliance with the terms and conditions stated in the Decision and Order. The petitioner

shall provide all miners involved in well intersection with training on the requirements of the Decision and Order prior to mining within 150 feet of the next well intended to be mined through.

(24) The responsible person required under 30 CFR 75.1501, Emergency evacuations, shall responsible for well intersection emergencies. The well intersection procedures shall be reviewed by the responsible person prior to any planned intersection.

(25) Within 30 days after the Decision and Order becomes final, the petitioner shall submit proposed revisions for its approved mine emergency evacuation and firefighting program of instruction required under 30 CFR 75.1502. The petitioner will revise the program of instruction to include the hazards and evacuation procedures to be used for well intersections. All underground miners shall be trained on this revised plan within 30 days of submittal. The procedure as specified in 30 CFR 48.3 for approval of proposed revisions to already approved training plans shall apply.

The petitioner asserts that the alternative method proposed will at all times guarantee no less than the same measure of protection afforded the miners under the mandatory standard.

Song-ae Aromie Noe,

Acting Director,

Office of Standards, Regulations, and Variances.

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